

The image features a futuristic, high-tech aesthetic. In the foreground, a sleek, metallic surface with blue and purple highlights curves across the bottom. In the background, several solar panels are displayed. One panel is a solid dark grey, while others are shingled, showing a grid of cells. The background is a dark blue with glowing red and white circuit-like patterns.

**Puma**  
SERIES

SHINGLED  
TECHNOLOGY

SUPERIOR PERFORMANCE  
AND RELIABILITY

**RECOM**  
TECHNOLOGIES®

## SHINGLED TECHNOLOGY

From 420Wp & up to 675Wp



### Reduced Risk Of Micro Cracks

#### ADVANTAGES OF PUMA SHINGLED MODULES

##### REDUCED RISK OF MICRO CRACKS

The replacement of soldered ribbons with a low temperature and flexible ECA decreases thermal stresses during the modules production and operation, decreasing the risk of micro cracks formation.

Mechanical stresses (e.g. snow load) are relieved by the flexible interconnection, improving the reliability in harsh environments (as reflected in the increased warranty provided).

##### HIGHER CELLS DENSITY AND IMPROVED AESTHETICS

The inactive area is considerably reduced, no ribbons and cells gaps on strings improving the efficiency and aesthetic in full black modules.

##### LOWER RESISTIVE LOSSES AND THERMAL COEFFICIENT

The resistive losses in strings are considerably decreased thanks to the lower current of shingles (1/6 or 1/7 of the original cell) and the lack of interconnection ribbons in strings, improving at the same time the performance at high temperatures.



Higher yield per  
surface area



Higher yield  
in hot climate



Low Pmax  
at -0,3% / °C



## KEY BENEFITS



25 Years Product Warranty



87,2% Performance Output Warranty After 25 Years



Over 20Wp More Compared to Standard Modules



Reduced Transportation Costs



Reduced Risk Of Micro Cracks



Module Efficiency up to 21,7%

## PERFORMANCE AT HIGH TEMPERATURES



HIGHER OUTPUT IN HOT CLIMATE

**+ 0,9 %**

Specific yield (kWh/kWp) due to low temperature coefficient



MORE EFFICIENT SPACE UTILIZATION

**- 3,1 %**

Space required for 1MWp of PUMA modules



HIGHER GENERATION PER UNIT AREA

**+ 4,1 %**

PV plant yield /sq.m. in hot climate

**PEAK POWER Up to 675Wp**

**MODULE EFFICIENCY 21,7%**

**TEMPERATURE RATIO - 0,34 %/°C**

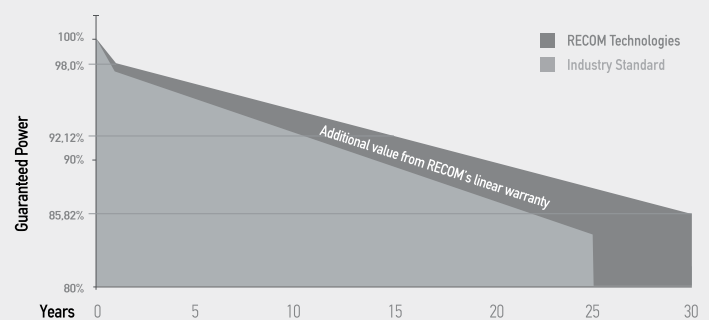
### SMALL SIZE FOR ROOF TOP INSTALLATION

The PUMA module with power class over 555Wp, efficiency up to 21,6% and 25 years product & up to 30 years output warranty is:

- Best "Value for money" choice
- Ideal for rooftop installations (in the same size of the rooftop, more power can be installed compared to standard modules)
- Low LCOE

### FOR COMMERCIAL & UTILITY INSTALLATIONS

The PUMA module with power class up to 675Wp, efficiency up to 21,7% and 25 years product & output warranty.



First Year Output | **≥ 98.0%**    2-30 Year Decline | **≤ 0.42%**    30 Year Output | **≥ 85.82%**

SEAMLESSLY INTEGRATES WITH THE ROOFTOP





[WWW.RECOM-TECH.COM](http://WWW.RECOM-TECH.COM)

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